

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for manufacturing a photomask blank having a film of at least one layer formed on a substrate, comprising the steps of forming a film on a substrate, and irradiating the entire surface of the film with light from a flash lamp, wherein an intensity of the irradiation is in a range of 0.1 to 100 J/cm² and a duration of the irradiation is up to 1 second.
2. (Original) The method of claim 1 wherein the step of forming a film on a substrate includes sputtering.
3. (Original) The method of claim 1 wherein the film of at least one layer has a lower light transmittance than the substrate.
4. (Original) The method of claim 1 wherein the film is a phase shift film.
5. (Original) The method of claim 4 wherein said phase shift film contains silicon, at least one metal other than silicon, and at least one element selected from the group consisting of oxygen, carbon and nitrogen.
6. (Original) A method for manufacturing a photomask comprising the steps of:

forming a patterned resist on the film on the photomask blank manufactured by the method of claim 1, by photolithography,
etching away those portions of the film which are not covered with the resist, and
removing the resist.

7-12. (Cancelled)

13. (Previously Presented) The method of claim 1 wherein the substrate is a transparent substrate and the film is a phase shift film, a light-shielding film or an antireflection film.

14. (Previously Presented) The method of claim 13 wherein the step of forming a film on a substrate includes sputtering.

15. (Previously Presented) The method of claim 13 wherein the film of at least one layer has a lower light transmittance than the substrate.

16. (Previously Presented) The method of claim 13 wherein the film is a phase shift film.

17. (Previously Presented) The method of claim 16 wherein said phase shift film contains silicon, at least one metal other than silicon, and at least one element selected from the group consisting of oxygen, carbon and nitrogen.

18. (Previously Presented) A method for manufacturing a photomask comprising the steps of:

forming a patterned resist on the film on the photomask blank manufactured by the method of claim 13, by photolithography,

etching away those portions of the film which are not covered with the resist, and removing the resist.

19. (New) The method of claim 1, wherein the step of irradiation converts compressive stresses to tensile stresses and thus reduces warpage in the photomask blank compared to a photomask blank not subjected to said irradiation.

20. (New) The method of claim 6, wherein the step of irradiation converts compressive stresses to tensile stresses and thus reduces warpage in the photomask compared to a photomask prepared without irradiation of the photomask blank.

21. (New) The method of claim 18, wherein the step of irradiation converts compressive stresses to tensile stresses and thus reduces warpage in the photomask compared to a photomask prepared without irradiation of the photomask blank.

22. (New) The method of claim 1, wherein the step of irradiation reduces stresses in the film and thus reduces warpage in the photomask blank compared to a photomask blank not subjected to said irradiation.

23. (New) The method of claim 6, wherein the step of irradiation reduces stresses in the film and thus reduces warpage in the photomask blank compared to a photomask blank not subjected to said irradiation.

24. (New) The method of claim 18, wherein the step of irradiation reduces stresses in the film and thus reduces warpage in the photomask blank compared to a photomask blank not subjected to said irradiation.